SD6411/S92643

December 2 2001

Express Mail No.: EL026585463US

## IN THE U.S. PATENT AND TRADEMARK OFFICE

APPLICANTS:

Marshall, et al

SERIAL NO.:

Unknown

GROUP NO.

FILED:

**EXAMINER:** 

FOR:

Self-Powered Microthermionic Converter

Assistant Commissioner for Patents Washington, D.C. 20231

December 2001

INFORMATION DISCLOSURE STATEMENT

The following sections are being submitted for this Information Disclosure Statement:

1. Preliminary Statements

Applicants submit herewith patents, publications or other information of which they are aware, which they believe may be material to the examination of this application and in respect of which there may be a duty to disclose.

The filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made (37 CFR 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability or that no other material information exists.

The filing of this Information Disclosure Statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

- 2. Form PTO 1449 (Modified).
- 3. The person making this statement is the attorney or agent who signs below on the basis of the information supplied by the inventor(s) and the information in the attorney's or agent's file.

Dated: 12/19/01

Phone: (505)845-3139 FAX: (505) 844-1418 Color Masson

Patent Agent, Reg. No. 45,604 Sandia National Laboratories

Patent and Licensing Center, 11500

P. O. Box 5800 / MS 0161

Albuquerque, New Mexico 87185-0161

Information Disclosure Statement Marshall, et al SD6411/S92463 Page 2

CERTIFICATE OF MAILING

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the U. S. Postal Service on the date shown below as Express Mail No. **EL026585463US** in an envelope addressed to the: Assistant Commissioner for Patents, Box Patent Application, Washington, D.C. 20231.

Dated: 12/20/01

Mary Loukota

Form PTO-1449 (SNL-Modified) (2-91)

List of Patents and Publications

for Applicant's Information Disclosure Statement

(use several sheets if necessary)

Atty Docket No: SD6411/S92463

Serial Number:

APPLICANT: Marshall, et al

GROUP: FILING DATE: 12\20 0

Ex'r		l lU	.S. Patent Documents	Sub		₽~ ≣
Init	į	Document No. Date	Name	•	File Date	8. 3144
			oreign Patent Documents Name	Sub  Class Class	Translation  Yes   No	702. 702.
	AA	6,294,858 9/25/01	King et al	310/306	2/25/99	C76

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

- IBA US patent application 09/895,350 "Microminiature Thermionic Converters", Donald B. King, Laurence P. Sadwick and Bernard R. Wensman, assigned to Sandia Corporation, Albuquerque, New Mexico, Docket No. SD-5987.2.
- IBB US patent application 09/895,372 "Chemical Vapor Deposition Techniques and Related Methods for Manufacturing Microminiature Thermionic Converters", Donald B. King, Laurence P. Sadwick and Bernard R. Wensman, assigned to Sandia Corporation, Albuquerque, New Mexico, Docket No. SD-5987.3.
- US patent application 09/257,336 "Low Work Function Materials for Microminiature Energy Conversion and Recovery Applications", Kevin R. Zavadil, Judith A. Ruffner and Donald B. King, assigned to Sandia Corporation, Albuquerque, New Mexico, Docket No. SD-6354.
- (BD & Spatent application "Micro Heat Barrier", Albert C. Marshall, Stanley H. Kravitz, Chris P. Tigges and Gregory Allen Vawter, assigned to Sandia Corporation, Albuquerque, New Mexico, Docket No. SD-6609.
- US patent application "Methods for Fabricating a Micro Heat Barrier", Albert C. Marshall, Stanley H. Kravitz, Chris P. Tigges and Gregory Allen Vawter, assigned to Sandia Corporation, Albuquerque, New Mexico, Docket No. SD-7075.
- |BF G. N. Hatsopoulos and E. P. Gyftopoulos, "Thermionic Energy Conversion" Volume 1: Processes and Devices" Copyright 1973 pp. 17
- |BG M.M. El-Wakil, "Nuclear Energy Conversion" Copyright 1982 pp. 450 495
- IBH Yuri V. Nikolaev, Stanislav A. Eryomin, Yuri D. Karpechenko, Michael D. Kochetkov "Close-Spaced Thermionic Converters for Power Systems" Proceedings Thermionic Energy Conversion 1993, Specialist Conference May 5-7 1993, Goteborg, Sweden.
- (BI Gary Fitzpatrick, et al "Demonstration of Close-Spaced Thermionic Converters" 1993 28th Intersociety Energy Conversion Engineering Conference
- |BJ Kucherov R. Ya., Nikolaev Yu.V, "Closed Spaced Thermionic Converter With Isothermic Electrodes" 1994 29th Intersociety Energy Conv. Engineering Conference VI

- BK Gary O. Fitzpatrick, et al "Close-Spaced Thermionic Converters with Active Spacing Control and Heat-Pipe Isothermal Emitters" 1996 31st Intersociety Energy Conversion Engineering Conference.
- BL G. D. Mahan and L. M. Woods, "Multilayer Thermionic Refrigeration" Physical Review Letters, Vol. 80, Num 18 4 May 1998
- |BM Ali Shakouri and John E. Bowers, "Heterostructure Integrated Thermionic Coolers" 1997 American Institute of Physics
- J. P. Fleurial et al "Development of Thick-Film Thermoelectric Microcoolers using Electrochemical Deposition" Mat. Res. Soc. Symp. Proc. Vol. 545 Thermoelectric Materials 1998 – The Next Generation Materials for Small-Scale Refrigeration and Power Generation Applications, 1999 Materials Research Society

Commission	Date Considered:
Examiner:	